

Claims

1. An optionally self-propelling machine for bedding out seed or plant tapes (3) and including a frame (4), where at least one bedding out unit (2) provided with a plough member (6) is mounted on said frame, said machine further including a carrying pole (29) to be connected to the front of a tractor frame (4), and where the plough member (6) is associated with a conveyor (9) including at least one continuous belt, as well as where the bedding out unit (2) is provided with a supporting plate (13) for at least one supply container (14) for the seed or plant tape (3) to be bedded out in a furrow (32) produced by the plough member (6), **characterised in** that the bedding out unit (2) includes a plough member (6) of a substantially U-shaped cross section, where the top webs of the U are substantially horizontally projecting stabilising webs (7a, 7b), and where said plough member (6) is of a length (L) of at least approximately 30 cm and a width (b) measured across the U of 15 to 50 mm, preferably approximately 30 mm, and where the conveyor of said plough member is formed by a very inclined main conveyor (9) with two continuous conveyor belts (10, 11) arranged adjacent, but with a mutual, preferably adjustable distance (a) to one another, said main conveyor (9) extending over most of, preferably substantially the entire length (L) of the plough member (6), and that the supporting plate (13) is adjustable with respect to height and/or angle, and that at least two pressure wheels (16a, 16b) are mounted on the rear end (2b) of the machine for pressing down the earth around the seed or plant tape portion which has just been bedded out in the furrow (32).
2. Machine as claimed in claim 1, **characterised in** that a pre-conveyor (16) is inserted between the supporting plate (13) for the supply container (14) and the main conveyor (9), said pre-conveyor being adapted to run at a speed slightly slower than the speed of the main conveyor (9), and that said pre-conveyor is optionally mounted on a slide (17) reciprocable in the longitudinal direction of the machine.
- 30 3. Machine as claimed in claim 1 or 2, **characterised in** that a pair of co-acting separation rollers (18a, 18b) are mounted between the main conveyor (9) and the pre-

conveyor (16), where preferably one or the other or both separation rollers include at least one separation rib (19), and that the peripheral speed of the separation rollers correspond substantially to the advancing speed of the main conveyor.

- 5 4. Machine as claimed in one or more of the claims 1 to 3, **characterised in** that a knife is mounted between the two conveyors (9, 16) for cutting the seed or plant tape (3) into small tape pieces, where each tape piece includes one or more seeds.
- 10 5. Machine as claimed in one or more of the claims 1 to 4, **characterised in** that the supporting plate (13) is adapted to include many supply containers (14) for seed or plant tapes (3).
- 15 6. Machine as claimed in one or more of the claims 1 to 5, **characterised in** that the main conveyor (9) includes two driving rollers (9a, 9b) and two tightening rollers (9a', 9b') arranged adjacent one another, as well as two continuous conveyor belts (11, 10) extending around their respective free guiding webs (21a, 21b) of a profile guideway (21) presenting a substantially U-shaped cross section.
- 20 7. Machine as claimed in one or more of the claims 1 to 6, **characterised in** that the profile guideway (21) of the conveyor (9) at the bottom web (21c) of its U-shaped cross section is hinged (25) to the bottom web (7c) of the U-shaped cross section of the plough member (6).
- 25 8. Machine as claimed in one or more of the claims 1 to 7, **characterised in** that the conveyor belts (10, 11) of the continuous conveyors are made of plastics or textile presenting a high strength, and on the side facing the seed or plant tape or portions thereof these conveyor belts present a rough surface, said side for instance being coated with emery or be provided with small friction-producing projections made of rubber or plastics.

9. Machine as claimed in one or more of the claims 1 to 8, **characterised in** that two auxiliary rollers (12a, 12b) are arranged at the rear end (2b) of the profile guideway (21), where the conveyor belts (10, 11) of the main conveyor (9'a) can run around their respective auxiliary rollers.

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10. Machine as claimed in one or more of the claims 1 to 9, **characterised in** that the front end (2a) of the plough member (6) is provided with a nose member (23) of ceramic material so as to reduce the wear and tear of the plough member (6).

10 11. Machine as claimed in one or more of the claims 1 to 10, **characterised in** that the driving rollers (9a, 9b) are driven by one or more drive means, such as one or more electromotor (24) supplied with power from the tractor.

12. Machine as claimed in one or more of the claims 1 to 11, **characterised in** that a
15 sensor (34) is mounted on the plough member (6), preferably at the rearmost end (2b) of said plough member, said sensor detecting the speed of the plough member (6) relative to the ground, where said sensor can transmit an electric signal to a preferably remote-controlled program control unit (27) adapted to transmit command signals to the drive means (24) of the main conveyor (9) and optionally also to the drive means of the
20 pre-conveyor (16) concerning the speeds to be used for running said conveyors relative to the plough member (6).

13. Machine as claimed in one or more of the claims 1 to 12, **characterised in** that the outer paths (10a) and (11a) of each continuous belt of the main conveyor (9) are at
25 least partially covered by a protecting shield (29).

14. Machine as claimed in one or more of the claims 1 to 13, **characterised in** that the top side of the bedding out unit (2) as well as the supporting plate (13) for the supply containers (14) are covered by one or more preferably transparent protecting shields
30 (33) of for instance Plexiglass or plastics.

15. Machine as claimed in one or more of the claims 1 to 14, **characterised in** that the plough member (6) is of a length (L) of 50 to 150 cm, preferably 100 to 125 cm, especially approximately 110 cm, and that the angle (ν) of the main conveyor (9) relative to horizontal is adjustable within the angular range of 0 to 45°C, especially 0 to 35°C.

16. Machine as claimed in one or more of the claims 1 to 15, **characterised in** that the carrying pole (29) is adapted to be secured on a parallelogram suspension on the front end of the tractor.

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17. Machine as claimed in one or more of the claims 1 to 16, **characterised in** that the two pressure wheels (16a, 16b) are wide and slightly inclined to each side relative to the longitudinal mid-plane (30) of the furrow (32).